SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	**Epsom Salt, Technical Grade**
Alternative names	Magnesium sulfate, heptahydrate
CAS No.	10034-99-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s)	Industrial use only

1.3 Details of the supplier of the safety data sheet

Company Identification	PQ Corporation P.O. Box 840 Valley Forge PA 19482 USA
Telephone:	+1 610-651-4200
E-Mail (competent person)	sds.uk@pqcorp.com

1.4 Emergency telephone number

Emergency Phone No.	+1 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification	Not classified as dangerous for supply/use.
EC Classification	Not classified as dangerous for supply/use.
Hazards summary	May cause mild eye irritation

2.2 Label elements

Hazard pictogram(s)	
Signal word(s)	Not applicable
Hazard statement(s)	Not applicable
Precautionary statement(s)	Not applicable
2.3 Other hazards	Caution - spillages may be slippery.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)

Ingredient(s)	%W/W	CAS No.	EINECS No. / REACH Registration	Hazard symbol(s) and hazard statement(s)
Magnesium sulfate, heptahydrate	100 %	10034-99-8	231-298-2	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact	If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If symptoms persist, obtain medical attention.
Skin Contact	If irritation (redness, rash, blistering) develops, get medical attention.
Inhalation	Remove patient from exposure, keep warm and at rest. If symptoms develop, obtain medical attention.
Ingestion	Do not induce vomiting. Wash out mouth with water. If large amount swallowed or symptoms develop obtain medical attention.
4.2 Most important symptoms and effects, both acute and delayed	May cause mild eye irritation

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media	
Suitable Extinguishing Media	Compatible with all standard fire fighting techniques.
Unsuitable extinguishing Media	Not applicable.
5.2 Special hazards arising from the substance or mixture	Inorganic powder or granules. Non-combustible.
5.3 Advice for fire-fighters	Goggles. A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Goggles. An approved dust mask should be worn if dust is generated during handling. See Also Section 8.
6.2 Environmental precautions	Sinks and mixes with water.
6.3 Methods and materials for containment and cleaning up	Caution - spillages may be slippery. Contain spillages. Dampening with water can reduce dust. Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal. Observe Local Regulations.
6.4 Reference to other sections	Not applicable.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	Avoid generation of dust. See Also Section 8. Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the work place.
7.2 Conditions for safe storage, including any incompatibilities	Keep container tightly closed and dry. Protect from extremes of temperature and humidity. Store bags flat until use.
7.3 Specific end use(s)	Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

SUBSTANCE.	Occupational Exposure Limits
	UK EH40: Dust Total inhalable: WEL 10mg/m3 8h TWA. Respirable: WEL 4mg/m3 8h TWA. ACGIH: Particulates not otherwise classified Inhalable TLV 10mg/m3 8h TWA. Respirable: TLV 3mg/m3 8h TWA. OSHA: Inert or Nuisance Dust Total dust : PEL 15mg/m3 8h TWA. Respirable fraction : PEL 5mg/m3 8h TWA.

8.2 Exposure controls

8.2.1 Appropriate engineering controls	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.
8.2.2 Personal Protection	
Respiratory protection	Avoid inhalation of dusts. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or where there is any risk of the exposure limits being exceeded. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.
Eye/face protection	Safety spectacles. Goggles.
Skin protection	Wear suitable protective clothing and gloves. If abrasion or ittiation occurs
8.2.3 Environmental Exposure Controls	Not applicable.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Powder. White.
Odour	Odourless.
Odour Threshold (ppm)	
pH (Value)	6 - 7 at 5% w/w in water.
Freezing Point (°C)	Not applicable.
Melting Point (°C)	> 1000
Boiling Point (°C)	Not applicable.
Flash Point (°C) [Closed cup]	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapour Pressure (mm Hg)	Not applicable.
Vapour Density (Air=1)	Not applicable.
Density (g/ml)	Not applicable.
Solubility (Water)	71 g/100 ml at 20°C, 91 g/100 ml at 40°C
Partition Coefficient	Not applicable.
Auto Ignition Point (°C)	Not applicable.
Decomposition Temperature (°C)	Not applicable.
Viscosity (mPa. s)	Not applicable.
Explosive properties	Not applicable.
Oxidising Properties	Not applicable.
9.2 Other information	Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal temperature conditions and recommended use.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous reactions	None known.
10.4 Conditions to avoid	Not available.

10.5 Incompatible materials	Metal hydrides and other water reactive materials.
10.6 Hazardous decomposition product(s)	At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Ingestion	RTECS reports Oral TDLo= 428 mg/kg in man 351 mg/kg in women
Inhalation	Dust may cause irritation
Skin Contact	Dust may have a drying effect on the skin.
Eye Contact	Dust may cause discomfort and mild irritation.
Skin corrosion/irritation	Dust may cause irritation
Sensitisation	Not classified
Mutagenicity	Not classified
Carcinogenicity	Components are not listed by IARC, NTP or OSHA as carcinogens.
Reproductive toxicity	Not classified
STOT - single exposure	Not classified
STOT - repeated exposure	Not classified
Other information	Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Not available.
12.2 Persistence and degradability	Not available.
12.3 Bioaccumulative potential	
12.4 Mobility in soil	Sinks in water
12.5 Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
12.6 Other adverse effects	Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Not a hazardous waste under RCRA Sec.3001. This material is not classified as hazardous waste under EC Directive 2008/98/EC (and amendments). This material is not classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number	Not classified as hazardous under DOT or US Transport Recommendations.
14.2 Proper Shipping Name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	No special packaging requirements.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

TSCA Inventory Status: Reported/Included.
AICS Inventory Status: Reported/Included.
DSL/NDSL Inventory Status: Reported/Included.
Magnesium sulfate is an FDA GRAS substance pursuant to 21CFR 184.1443
HMIS:

Health Hazard:	0
Fire Hazard:	0
Reactivity:	0

15.2 Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

This SDS was last reviewed: 07/2014
The following sections contain revisions or new statements: New Issue

EC Classification No. 67/548/EEC	Not classified as dangerous for supply/use.
Hazard Symbol	
Risk Phrases	
Safety Phrases	Handle in accordance with good industrial hygiene and safety practices. Avoid inhalation of dusts.
GHS Classification	Not classified as dangerous for supply/use.
Signal word(s)	Not applicable
Hazard pictogram(s)	
Hazard statement(s)	Not applicable
Precautionary statement(s)	Not applicable

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